REMARKS

Allowed claims

Claims 25 to 33 have been allowed.

Claims 20 and 21 have been indicated allowable if drafted in independent form. Claim 20 has here been amended to independent form, and is believed allowable. Claim 21 depends from claim 20, and is therefore also believed to be in allowable form.

This amendment increases the number of independent claims by one. Please deduct the amount of $86.00 for the extra independent claim from deposit account 501659.

Prior art rejections

The Examiner has rejected claims 1 to 19, 22, 23 and 24 as unpatentable over Hsu alone, or over Hsu combined with Wilson et al., Tanaka, Warner, or Cooper. Reconsideration of this rejection is respectfully requested.

Claim 1 as amended claims a system for displaying a field of view representing values of a simulated data variable. The system has an image generator with a computer with an output, on which a simulation-generated video signal is transmitted. The video signal comprises at least two digital data channels. A display system is connected with the output of the image generator and receives the channels of digital data. The display system includes a combiner circuit receiving and processing the channels of data, and also has a visual display device connected with the combiner circuit and displaying video imagery derived from the video signal in a field of pixels so as to be viewable by a user. The digital data channels of the video signal from the image generator each comprise a plurality of bit sets, each corresponding to a respective location in the field of view and having a preset number of bits of digital data. The bit sets of the first channel

each represent a respective value of the simulated data variable at a first resolution, and the bit sets of the second channel each represent a respective value of the simulated data variable at a second resolution higher than the first resolution.

This inventive combination is not suggested by the prior art, and provides the advantage of efficient transmission of data in a simulator, such as particularly, for example, simulated monochrome displays for infra-red sensors. See, e.g., specification, page 4, lines 8 to 20.

The cited Hsu reference does not suggest such a system. Hsu discloses a system for extracting objects from a real image sensing input and identifying them. As such, Hsu does not have an image generator producing a simulation-generated video with two channels of digital data. Hsu only teaches retrieving a real image, and then processing it to segment it to identify objects. Col. 4, lines 17 – 21. Identification is accomplished by comparing the segmented objects to an image library. Col. 4, lines 22 – 24. See also lines 48 to 52.

Hsu does discuss the use of multi-level resolution calculations based on a single image to produce segmentation. See. E.g., col. 13. lines 35 to 53. However, this is not a transmission of two fields of simulated data variables, but rather an internal manipulation of the data of one set of real detected monochrome values. There is no video output of two independent data channels at different resolutions created, nor is there a transmission to a display system that displays imagery from the simulated video to be viewable by a user.

There is a reference to simulation in Hsu, but it relates only to preparation of the library of images that the objects segmented from the real image are compared to. See col. 18, lines 38 to 49 (". . . the Markov Random Field model can be applied to the existing partial shape library to create a more realistic model based shape library (images) to match against the observed LADAR images for ATR/I analysis. A simulation has been conducted using a noise model-based

shape library to identify observed LADAR images. This simulation is done simply by adding a sample of observed LADAR images to the wire-frame models-based partial shape library A significant . . . improvement in correct target recognition rate is obtained by replacing the original pure model library with this mixed (observed plus models) library."). The only simulation here discussed in Hsu is a noise simulation mapped onto the simpler wire-frame models in the image library that are compared to the objects extracted from the real images. This makes matching with real objects more reliable. However, there is nothing in this discussion of noise simulation of images for recognition that could remotely suggest the claimed simulated video output of at least two channels of data of different resolutions.

Hsu therefore does not suggest the claimed system.

Wilson et al., Tanaka, Cooper and Warner are all cited for teaching various details of real infra-red detecting or imaging systems. None of these references teaches or suggests a system as claimed where a simulated video output has two channels of data at different resolutions.

Claim 1 therefore distinguishes over the cited prior art, and reconsideration of the rejection of claim 1, and allowance thereof, is respectfully requested.

Claims 2 to 19 and 22 to 24 depend directly or indirectly from claim 1, and therefore distinguish therewith over the prior art.

All claims herein having been shown to distinguish over the prior art, formal allowance is respectfully requested.

Should any questions arise, the Examiner is invited to telephone attorney for applicants at 212-490-3285.

Respectfully submitted,

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